

**Working
Paper**

**Natural Resources
Governance in
Central Sulawesi:
Experiences Of
Nickel-based
Industries
in Morowali**

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I. Foreword

This paper discusses natural resources governance by looking specifically at developments in nickel-based industries in Morowali, Central Sulawesi. Unlike its commonly used and practiced definition, governance, in this paper is stressed as the way the market works. Morowali was chosen as a case study as it has seen fundamental changes in management policies for natural resources, particularly minerals, post reformasi. Law No. 4/2009 on Mineral and Coal Mining (State Gazette No. 4, 2009) is often deemed to suppress markets because it foments nationalism in mineral utilization. But what is never seen is that the mining downstreaming obligation supported by this law has driven Morowali into the maelstrom of global capitalism as a center for integrated production of semi-finished nickel and stainless steel. And the motor behind this drive is huge capital investment from China.

DEFINITIONS OF GOVERNANCE

“Governance” and “good governance” have become buzzwords in Indonesia since reformasi in 1998. Multilateral, donor, government and semi-government institutions, as well as non-governmental organizations use these terms widely, particularly through economic and political reform programs. In shallower, but widely used definitions, governance and good governance constitute weapons to prevent bribery, corruption, and government policies from only benefiting members of ruling elites. Consequently, governance and good governance

are considered neutral, and therefore, not up for debate. Just implementation!

However, in a broad definition, governance reflects the shifting of roles from government as the main actor to a more plural group of actors. Generally, government refers to formal state institutions and the legitimacy they have in their monopoly over coercive power (Stoker, 1998:17). Liberalism prevents government from having unlimited control, as one of its doctrines is limited government (Locke, 1980). In the context of this limitation, governance becomes important. Governance relates to processes of coordination, management, and social and economic control. Jessop discusses three forms of coordination: anarchy of exchange (market forces), organizational hierarchy (coordination forced by the State), and self-organizing hierarchy (self-organization). Jessop calls self-organizing hierarchy governance (1999:351). Self-organizing hierarchy covers networks between self-organizing personnel, negotiated coordination between organizations, and decentralization (Jessop, 1998:29). Rhodes says governance is broader than government and covers non-state actors. Governance relates to a plurality of actors (Rhodes, 1997:53). Governance, therefore, is not merely an exclusive arena for government actors, but also involves other actors such as private companies, non-governmental organizations, religious organizations, and various grassroots organizations - a stakeholder arena, to adopt corporate terminology.

So, more than merely a neutral term, governance (coordination through a network of actors) constitutes an ideological product to shift the government role (coordination through hierarchy). This constitutes a tendency towards political system distalization, i.e., shifting the central role of the State in ensuring the economic and social projects it sponsors and its political hegemony towards partnerships between government and non-government organizations. This shift means the state apparatus is only one actor (Jessop, 1997:574-5). The State can no longer be seen as the sole actor representing public interests, but as only one together with other, non-state actors.

The shift from government to governance becomes important in the era of capitalism, particularly neoliberal capitalism. In this era, the State should strive to reduce hinderances to the movement of trans-territorial capital (Harvey, 2007:66). The government shifts from being a servant of the public to a servant of capital. Governance is a strategy for limiting government control, so it becomes submissive to capital. Under this framework, various multilateral organizations introduced the mantra of "good governance". Using this mantra, the World Bank and International Monetary Fund became drivers for coordinating the government and non-governmental organizations in international development (Cammack, 2003). These two multilateral bodies specifically tied development aid for developing countries to requirements for public service sector reform programs. Therefore, good governance is not only about transparency and accountability in government administration, efficient use of government resources, participation in policymaking, and respect for the law. More than that, good governance relates to the need to ensure capitalism works globally. The duty of

government, according to good governance, is to introduce and support capitalism. In its World Development Report 2002, the World Bank affirms this as follows:

"Good governance includes the creation, protection, and enforcement of property rights, without which the scope for market transactions is limited. It includes the provision of a regulatory regime that works with the market to promote competition. And it includes the provision of sound macroeconomic policies that create a stable environment for market activity. Good governance also means the absence of corruption, which can subvert the goals of policy and undermine the legitimacy of the public institutions that support markets" (World Bank, 2002:99).

De Angelis sees good governance as the consolidation of the neoliberalism project through the Washington Consensus. He says good governance implies the configuration of government bodies to facilitate provisions on the Washington Consensus (De Angelis, 2005:237). The Washington Consensus is a series of free-market economic policies promoted by the International Monetary Fund, the World Bank and the United States Department of Finance to overcome development problems in developing countries. These policies cover fiscal discipline, public spending priorities avoiding subsidies, tax reforms, financial liberalization where interest levels are determined by the market, competitive currency values, trade liberalization and foreign direct investment, and the privatization of State companies (Williamson, 1993).

II. Mineral Governance In Indonesia

Mineral governance in Indonesia rests on the need to ensure international capital investment. Since the New Order era, Indonesia has had its most liberal regulation of the utilization of non-oil and gas minerals. Law No. 11/1967 on Basic Mining Provisions (State Gazette No. 22, 1967) protects foreign investment in mining. Through the Kontrak Karya work contract scheme, foreign investors received preferential treatment. In addition to tax breaks, work contracts provided investors with long-term concessions, shareholding certainty, *lex specialis* provisions that protected them from future changes to government policies, and the obligation to resolve disputes through the international arbitration mechanism (Sangadji, 2019:56-7). Work contracts were a manifestation of the Government of Indonesia's accommodation of the interests of large foreign companies. This reflects how international capital works in the hierarchy of global capitalism.

The privileges of work contracts were not born out of a vacuum. The destruction of the Old Order under the influence of western imperialistic power was key. After opposing the anti-western Old Order regime, and with the emergence of the New Order, the United States actively dictated to the Government of Indonesia in preparing the text for the extremely liberal Foreign Investment Law (see State

Gazette No. 1, 1967). This allowed Freeport Sulphur, through Freeport Indonesia, to invest in Papua. Van Sickle Associates, a Denver based consultancy company, helped Widjojo Nitisastro, an architect of the New Order economy, to draft the text of the Foreign Investment Law (Simpson, 2008:231-6). So, the first generation of work contracts privileged Freeport thanks to the United States having leeway to dictate to Indonesia on the formulation of regulations on minerals at that time. For Indonesia, by signing the work contract with Freeport, the government wanted to secure economic and political support from the United States (Leith, 2003:60).

Work contracts are an example of mineral governance born from asymmetric interaction between the superpower United States of America and a weak state like Indonesia. However, they also involved supranational institutions like the United Nations Commission on International Trade Law (UNCITRAL) to ensure markets regulated global investments. In addition to Freeport, which is a non-state actor with direct investment interests, under governance, the New Order State opened – or was forced to open – its borders to submit to mining capital. In terms of good governance, work contracts were a practical translation of neoliberal strategy, particularly foreign

investment liberalization supported by the Washington Consensus, even though this consensus appeared long after the first work contract was issued in the 1960s. Briefly, work contracts teach us that governance is really nothing more than a shield to protect the interests of giant global investors.

Mineral governance came into question, particularly after the reformasi era in 1998, regardless of reformasi itself being identified with the consolidation of international capital. The transition to democracy period is considered a more unfriendly era for foreign investment in the mining sector. Deficient regulation, corruption and an absence of institutional capacity were the fundamental problems facing foreign investors (O'Callaghan, 2010). Following decentralization, overlapping regulations, illegal mining, transactional license issuing, corruption, environmental destruction, and poor regional government capacity in regulating the mining sector all exacerbated the situation. This is not to say mining practices were any better under work contracts during the Suharto era. A case in point being Freeport, where corruption, large-scale environmental degradation, the seizure of customary regions and various forms of human rights violations all bear testimony to this (Leith, 2003). And similar occurrences have continued long after the fall of Suharto.

The peak of governance problems is linked to Law No. 4/2009 on Mineral and Coal Mining (hereinafter the Mining Law) as this law ended the privileges under work contracts, replacing them with mining business licenses (IUPs). A number of things differentiate the Mining Law from Law No. 11/1967, including its requirement for mining companies to secure different permits for the exploration and exploitation stages of mining operations. The Mining

Law allows foreign ownership of up to 100 percent, but only for specified time periods. The Mining Law provides the government with power to control the production and export of mineral commodities and affords regional governments the authority to issue IUP business licenses in their regions. Most importantly, the new law obligates companies to smelt and purify minerals domestically. The law has been considered nationalistic and a constraint to foreign investment. Some pro-market academics, such as Warburton (2017), felt Indonesia was forcing resource nationalism.

Foreign investors have poor perceptions of the new mining policy. A PricewaterhouseCoopers (PwC) survey recorded several issues about mining in Indonesia. These included poor coordination between central, provincial, and district/municipal governments, confusion in implementing the Mining Law, conflicts between mining operations and forestry sector policies, political risks, regional government relationships, asset security and ownership rights including over mining licenses, corruption, collusion and nepotism, difficulties building in-country processing facilities, improving tax and royalty system competitiveness, relationships with surrounding communities, renegotiating work contracts, disruptions from other government bodies such as tax authorities, illegal mining, divestment obligations, regulation on mining contractors, procuring land, and labor rules (PwC, 2013:42). All of these are about governance.

The decentralization of mining licensing has exacerbated problems. In mineral-rich regions, regional heads raced to issue IUPs, with a boom in such licenses in only a few years. By March 2014, 10,918 IUP licenses had been issued

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across Indonesia (Ministry of Energy and Mineral Resources Directorate General of Minerals and Coal, 2014:5). There have been many incidences of overlapping between different IUPs and between IUPs and work contracts. Regional governments often issue IUPs in conservation areas and protection forests. Forest degradation has spread because IUP holders carry out mining with poor environmental management standards. Corruption cases involving regional heads have mushroomed in the midst of the IUP license granting boom. IUP licensing has been used as a tool for funding expensive attempts to secure political power with regional heads being directly elected through regional elections.

In the midst of mining investment complexities in Indonesia, the growth of nickel processing industries in Morowali district has brought a special impression of its own. The obligation to build domestic processing facilities has been answered very convincingly by the growth of the Indonesia Morowali Industrial Park (IMIP), the largest nickel processing industrial estate in Indonesia. This rapid growth is a manifestation of the pro-foreign investment governance mechanism. The IMIP estate is an ongoing reflection of how international capital works in making use of current pro-market policies in Indonesia.

III. Development And Nickel-Based Industries In Morowali

1 NATURAL RESOURCE-BASED CAPITAL IN CENTRAL SULAWESI

Large natural resources-based investments have been ongoing in Central Sulawesi since the New Order era. Timber concession (HPH) license holding companies, including with foreign capital, have been operating since the early 1970s. One prominent example was PT Marabunta, a joint venture between PT Tri Usaha Bhakti, a unit of the Indonesian military (ABRI) and a Japanese company. The company had a concession of 320,000 hectares, part of which was in the Morowali Nature Reserve (Sudaryanto, 2003:241-4). Large investments in oil palm plantations began in Central Sulawesi in the 1990s. Major investors are parts of large groups such as Minamas Plantation, Central Cipta Murdaya, Astra Agro Lestari and Sinar Mas.

Different to investments in forestry and estate crops, investments in oil and gas and minerals mainly took place after the New Order era. Banggai district has been host to upstream and downstream natural gas projects. Upstream players in natural gas production value chains are PT Pertamina Hulu Energi Tomori Sulawesi, PT Medco E&P Tomori Sulawesi, and Tomori E&P Ltd through Joint Operating Body Pertamina–Medco E&P Tomori Sulawesi (JOB PMTS). Another is PT Pertamina Eksplorasi dan Produksi through the Matindok Gas Development Project

(MGDP). The foreign investment company PT Donggi-Senoro LNG (DSLNG) is a downstream investor producing liquefied natural gas (LNG). Sulawesi LNG Development Limited controls a 59.9 percent stake in DSLNG, while PT Pertamina Hulu Energi, a subsidiary of PT Pertamina, controls a 29 percent stake, and PT Medco controls 11.1 percent. Mitsubishi Corporation controls a 75 percent share of Sulawesi LNG Development Limited and Korea Gas Corporation (Kogas) controls 25 percent (Donggi-Senoro LNG, 2020).

DSLNG, producing since 2015, owns a processing plant in Uso village, Batui subdistrict, Banggai district. The company has purchasing agreements with natural gas producers, JOB PMTS and MGDP through which LNG is exported to Japan and South Korea. DSLNG has long-term LNG sales contracts with buyers in the two countries. Each year, DSLNG supplies 1 million tons and 300,000 tons of LNG respectively to JERA Co. Inc. and Kyushu Electric Power Co. Inc. in Japan. DSLNG also sells 700,000 tons of LNG annually to Kogas, South Korea. President Joko Widodo officially launched the first overseas shipment on 2 August 2015 (Donggi-Senoro LNG, 2020).

Large-scale non-oil and gas mining began around 10 years ago. Even though the

government issued some work contracts in Central Sulawesi in the New Order era, there was never any production at that time. PT Inco Indonesia/PT Vale Indonesia had work contracts for mining nickel in several regions in Central Sulawesi, but never began exploitation. In 1999, PT Rio Tinto Indonesia also secured a 'permit in principle' for work contract negotiations with the Government of Indonesia to mine nickel on the border of Central and Southeast Sulawesi, but there were no significant activities by the company. Nickel mining only began to appear in 2009. In Poboya, Palu municipality, PT Citra Palu Minerals (CPM) has recently started mining gold, producing 17.76 kilograms from February to August 2020. PT Bumi Resources Minerals (BRM) controls a 96.97 percent stake in CPM whose production license lasts for 30 years, until 2050 (BRM, 2020:2-3, 7).

2 NICKEL PROCESSING IN INDONESIA

Indonesia has rich nickel deposits, and Indonesia's nickel reserves made up 22.34 percent of total world nickel reserves in 2019. In the same year, 32.68 percent of total world mining production took place in Indonesia (USGS, 2021). Of the two types of nickel ore – laterite and sulfide – Indonesia has laterite. Generally, laterite consists of limonite and saprolite. Limonite contains low metal content (<0.5-1.5 percent Ni, <0.1-0.2 percent Co, <50-50 percent Fe, and 0.5-5 percent MgO). Saprolite has high metal content (1.8-3 percent Ni, 0.02-0.1 percent Co, 10-25 percent Fe, and 15-35 percent MgO Co). Limonite is found above the saprolite layer, and is easier to mine (Elias, 2013; Arif, 2018:69-70).

Several methods are used in nickel smelting. Saprolite type laterite smelting uses pyrometallurgical methods with rotary kiln electric furnace and blast furnace/electric arc furnace (BF/EAF) techniques. These are used to

produce grade II nickel (nickel pig iron or NPI and ferronickel), which is used mainly in stainless steel production. Limonite type laterite processing uses hydrometallurgical methods with high pressure acid leaching to produce semi-finished nickel as material for producing grade I nickel (≥ 99 percent Ni). However, using pyrometallurgy also produces nickel matte from sulfide ores, which is then converted, through various techniques, into grade I nickel. Battery production uses grade I nickel products (Schmidt et al., 2016:112).

As is the case globally, nickel processing industries in Indonesia use pyrometallurgy. Semi-finished nickel products in Indonesia like nickel matte, ferronickel, and nickel pig iron (NPI) are produced from this method to process saprolite nickel ore. With difficulties obtaining saprolite, industry players are striving to find technology that can process low content nickel ore using hydrometallurgy (Oxley and Barcza, 2013). In contrast, the construction of limonite nickel processing facilities that use hydrometallurgy with high pressure acid leaching techniques only began in Indonesia in early 2019, following the need to produce lithium-ion batteries for electric vehicles. Nickel is one of the main raw materials (Sangadji, et al., 2019). Indonesia is extraordinarily rich in nickel, which can be smelted and processed further, either to produce stainless steel or to make raw materials for electric vehicle batteries. One study estimates that by 2030, Indonesia will contribute 45 percent of the world's nickel supply for NPI and ferronickel smelters and semi-finished nickel facilities for in-country battery production (Fraser et al., 2021:28)

Nickel mining for global market needs has been going on for a long time in Indonesia. Nickel mining was already taking place in Sulawesi during the Dutch and Japanese colonial periods (Ter Braake, 1977:80-8). Now, mining and nickel smelting takes place in several locations in the

provinces of Central Sulawesi, South Sulawesi, Southeast Sulawesi and North Maluku.

As integrated nickel mining and processing is so capital intensive, few companies have invested since the New Order era. PT Vale Indonesia has had work contracts in three provinces in Sulawesi since 1968. The company currently owns concessions on 118,017 hectares, comprising 70,566 hectares in South Sulawesi, 20,286 hectares in Pomalaa and 4,466 hectares di Suasua, Southeast Sulawesi, and 22,699 hectares in Bahudopi, Central Sulawesi. Vale has a smelting facility in Sorowako, South Sulawesi, which has been producing nickel matte since 1978. In 2019, employing 3,044 people, the company produced 71,025 tons of nickel matte and secured earnings of USD 782 million with a profit (EBITDA) of USD 232.4 million (Vale Indonesia, 2020). Vale Indonesia is a subsidiary of Vale Canada Limited (VCL). Vale, or Companhia Vale do Rio Doce (CVRD) is the owner of VCL. In 2006, this Brazilian transnational company acquired an 89 percent stake in Inco limited Canada worth USD 19.4 billion (Ramsey et al., 2009). The outcome was PT Inco Indonesia, a subsidiary of Inco Limited, changing name to become Vale Indonesia. In 2019, VCL controlled a 58.73 percent stake in Vale Indonesia. Sumitomo Metal Mining Co. Ltd, Vale Japan Limited and Sumitomo Corporation controlled 20.49 percent, 20.09 percent, 0.54 percent, and 0.14 percent of shares respectively (Vale Indonesia, 2020).

PT Aneka Tambang (Antam) has been mining and operating a ferronickel processing facility in Pomalaa, Southeast Sulawesi since 1974. Antam is also mining and currently building a ferronickel processing facility with an annual capacity of 13,500 in East Halmahera district, North Maluku province. In 2019, Antam mined 8.70 million tons of nickel ore for selling to

domestic and overseas markets in addition to producing 25,713 tons of ferronickel. In 2019, the company had ferronickel sales of IDR 4.8 trillion and nickel ore sales of IDR3,7 trillion, securing a profit of IDR 2.10 trillion from its nickel business wing (Antam, 2020:313-14). In addition to nickel, Antam has gold, silver, bauxite and aluminum business wings. PT Indonesia Asahan Aluminium (Inalum) controls a 65 percent stake in Antam, while remaining shares are controlled by foreign and domestic business entities and individuals (Antam 2020:30). Inalum has been the parent company of all state-owned mining companies since 2017. The Government of Indonesia now controls a 100 percent stake in Inalum after a Japanese company divested in 2013. Prior to that, Inalum was an aluminum smelting joint venture between the Japanese company and the Government of Indonesia operating in Asahan district, North Sumatra (Inalum, n.d.).

Following the Mining Law, the government licensed nickel mining through IUP licenses. The government issued hundreds of IUP nickel licenses across Indonesia. This triggered nickel ore production and exports, particularly to China. Since 2010, Indonesia had been the main source of Chinese nickel ore imports for NPI production. Around 50 percent of China's nickel ore imports in 2013 came from Indonesia (UNCTAD, 2017:13).

On 12 January 2014, to encourage domestic smelting industries, the government banned exports of raw minerals. Government Regulation No. 1/2014 forces all companies holding work contracts and IUPs to process minerals domestically (State Gazette No. 1, 2014). This ban caused the majority of IUP production license holders to cease operations as they were unable to build smelters in country, resulting in around 30,000 mine workers losing their jobs (UNCTAD, 2017:20). The ban resulted in nickel ore exports plummeting. In 2014, the volume of nickel ore

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exports was only 4.1 million tons with a value of USD 8.9 million, compared to 64.8 million tons worth USD 1.6 billion in 2013 (BPS, 2015:114-5).

Following the ban, few Indonesian companies have built smelters, but those that have work with Chinese companies, which relocate NPI smelters from China to be closer to the raw material source in Indonesia. In only a few years, nickel smelters have been set up in a number of locations in Indonesia, the most prominent of which is the Indonesia Morowali Industrial Park (IMIP). PT Sulawesi Mining Investment (SMI) instigated its development. In addition to SMI, other NPI producing smelters are also operational in the estate. By early 2020, at least 28 rotary kiln electric furnaces were operating in the IMIP estate: twelve 39 kilovolt ampere (kVA) rotary kiln electric furnaces each producing 9,000 tons of NPI annually; sixteen 42 kVA rotary kiln electric furnaces each producing 10,000 tons of NPI annually; and one blast furnace producing 18,000 tons of NPI annually (Nornickel, 2020b:10). The IMIP estate has even become host to further value chain production, after stainless steel production plants have begun operating there.

The rapid development of smelters has brought dividends. Indonesian NPI production leapt from next to nothing in 2014 to nearly 170,000 tons in 2017, 260,000 tons in 2018 and 360,000 tons in 2019, with an estimated 534,000 tons for 2020 (Nornickel, 2018:6; Nornickel, 2020a:9; Mackenzie, 2019). NPI production comes mainly from the IMIP estate at an estimated 360,000 tons in 2020, predicted to leap to 400,000 tons in 2021 (Nornickel 2020b:10). In Central Sulawesi, in addition to the IMIP estate, smelters are also operational in North Morowali district where PT COR Industri Indonesia – a PT Central Omega Resources Tbk and PT Macrolink Nickel Development joint venture – operates a smelter

with an NPI production capacity of 100,000 tons annually (Central Omega Resources, n.d.).

On 12 January 2017, the government eased exports of low content nickel ore (<1.7 percent Ni) but banned exports of higher content nickel ore \geq 1.7 percent. This easing was laid out in Minister of Trade Regulation No. 01/M-DAG/PER/1/2017 on Export Provisions for Processed and Purified Mining Products (Official Gazette No. 137, 2017) and Minister of Energy and Mineral Resources Regulation No. 5/2017 on Increasing Added Value to Minerals through Domestic Mineral Processing and Purification (Official Gazette No. 98, 2017). However, export limitations have only been applied to IUP license holding companies relating to domestic nickel processing development. From 2017 to July 2019, the government provided nickel export quotas of 76.2 million tons, only 38.2 million tons of which were realized (Ministry of Energy and Mineral Resources, 2019). Among the companies securing export quotas was SMI (Ministry of Energy and Mineral Resources, 2017).

On 1 January 2020, the government banned exports of below 1.7 percent content nickel ore. This ban was laid out in Minister of Energy and Mineral Resources Regulation No. 11/2019 on Second Amendment to Minister of Energy and Mineral Resources Regulation No. 25/2018 on Mineral and Coal Mining (Official Gazette No. 984, 2019). This policy constituted an effort by the government to protect supplies of low content nickel ore for domestic processing industry needs. The onset of investment in facilities to produce nickel for battery production in Indonesia, like those in Morowali, by several transnational companies shows that domestic low content nickel ore processing industries are securing momentum. Facilities for producing nickel for batteries are currently being built in the IMIP estate.

3 THE EMERGENCE OF THE IMIP ESTATE

3.1 Nickel ore production before the IMIP estate

By 2014, Morowali had become one of Indonesia's centers for nickel mining. This followed Morowali District Government's issuing of nickel IUP licenses (exploration and production) to hundreds of companies for concessions covering hundreds of thousands of hectares. The Ministry of Energy and Mineral Resources named 204 IUP holders in Morowali in 2014. Mining nickel ore for export became popular in the region in the early 2010s. In 2013, official data showed raw nickel ore exports from Morowali reaching 8.3 million tons (Ministry of Energy and Mineral Resources Directorate General of Minerals and Coal, 2014).

Several problems have arisen from nickel mining in Morowali. Firstly, forest degradation and its consequences with the Ministry of Energy and Mineral Resources citing IUP licenses overlapping with tropical forest estates in Morowali. In February 2014, the Ministry announced such overlapping covering 398,553 hectares of forest estate, including: 145,163 hectares of conservation forest; 141 hectares of protection forest; and 253,249 hectares of other forest estates – production forest, limited production forest and convertible production forest (Ministry of Energy and Mineral Resources Directorate General of Minerals and Coal, 2014:11). Forest degradation is an unavoidable consequence of nickel mining, as open pit mining necessitates the clearing of forests to remove topsoil, excavation of the covering layer (overburden), and the construction of roads and other infrastructure. This leads to erosion, which frequently results in huge flash floods impacting downstream settlements.

It also leads to environmental problems downstream, with the government in Morowali concluding that nickel mining is responsible for environmental pollution. A team comprising representatives from the Ministry of Environment, the Central Sulawesi Provincial Environment Agency and the Morowali District Environment Office conducted field inspections on two occasions in Morowali. The team found 15 IUP mining license companies had led to water pollution in estuaries and waters around Morowali. In mid-November 2013, the Ministry of Environment subsequently told the Morowali District Head to temporarily shut down company operations (Ministry of Environment, 2013).

Secondly, there is a problem with overlapping mining concession licenses. Morowali District Government once issued scores of IUP licenses that overlapped work contract regions, especially with PT Vale Indonesia. Vale identified companies operating in its Bahudopi Block work contract region, including PT PanChina, PT Ang and Fang Brothers, PT Cipta Perkasa Sejati, PT Graha Sumber Mining Indonesia (GSMI), PT Kayu Kreasi Meridien, PT Pingxiang Mining Industry Group Indonesia, PT Prizka Rizkyah and PT Tri Daya Jaya (Vale Indonesia, 2012). By 2014, the Morowali District Head had revoked at least 33 IUPs that overlapped work contract areas in Morowali, 22 of which overlapped with the Vale work contract area (Vale Indonesia, 2015:426). Most recently, the Ministry of Energy and Mineral Resources revoked three IUPs, one of which overlapped with the Vale work contract area (Vale Indonesia, 2019:363).

Overlapping also occurred with PT Rio Tinto, which in 1999, secured a 'permit in principle' in negotiating a work contract with the government on the border of Central and Southeast Sulawesi provinces. However, in 2008, the Morowali District Head issued a mining right or Kuasa

Pertambangan (KP) to another party. Rio Tinto then filed a lawsuit against the Morowali District Government with the State Administration Court in Palu. The court decided against Rio Tinto. In February 2010, the Minister of Energy and Mineral Resources issued an IUP license to Rio Tinto through its subsidiary, PT Sulawesi Cahaya Mineral (Dabu and Haraito, 2011) for a 21,100-hectare concession in Konawe district, Southeast Sulawesi.

Nickel mining operations in Morowali almost came to a complete halt following the ban on raw mineral exports on 12 January 2014. The ban brought down many IUP license holders, and thousands of mine workers lost their jobs. However, a number of companies that were committed to building smelters continued to operate. One of these was PT Bintang Delapan Mineral (BDM), which in 2013, contributed 45 percent of total nickel ore exports from Morowali (Ministry of Energy and Mineral Resources, Directorate General of Minerals and Coal, 2014:22).

By January 2014, nickel ore processing industries had yet to develop, with next to no companies in Morowali processing mined nickel ore before it was exported. Building capital-intensive processing facilities was difficult for IUP license holders as constructing smelters requires a mastery of technology and significant capital investment. Furthermore, processing ferronickel from laterite ore, for instance, is extremely energy intensive and requires a lot of electricity (Zhu et al., 2012; Moskalyk and Alfantazi, 2002). Investments in electricity generation also require significant capital. Consequently, to be able to operate in regions with poor electricity infrastructure like Morowali and even Central Sulawesi, only giant companies can build smelters and electric power generating facilities simultaneously.

3.2 Developments in the IMIP estate

3.2.1 The role of transnational capital

The IMIP industrial estate, a joint Indonesia-China project, was established by law in 2013. The governments of Indonesia and China supported the private sector project. On 3 October 2013, witnessed by the President of China, Xi Jinping and President of Indonesia, Susilo Bambang Yudhoyono, the owner of Tsingshan Holding Group Co. Ltd (hereinafter Tsingshan group), Xiang Guangda and owner of Grup Bintang Delapan, Halim Mina signed a cooperation agreement to develop the industrial estate. The IMIP estate is a joint venture between Shanghai Decent Investment Co. Ltd., PT Bintang Delapan Investama and SMI (IMIP, 2018:1, 7). Tsingshan Group is the holding company of Shanghai Decent Investment, while Grup Bintang Delapan is the owner of BDM, a large IUP license concession holder in Morowali.

IMIP is a Chinese overseas economy and trade cooperation estate, as acknowledged by the Government of China through a joint statement by the Chinese trade and finance ministers in August 2016 (Eternal Tsingshan Group, n.d.). In this context, the IMIP estate is inseparable from the 'Belt and Road Initiative' (BRI) introduced by Xi Jinping in 2013 as a new development and trade initiative for China and surrounding regions. Academics have called BRI a policy for expanding Chinese state capitalism, to increase industrial production capacity and its growing capital investment interests (Wong et al, 2017). Unsurprisingly, as stated by Huang Weifeng (President Director of IMIP), Chinese banks like the China Development Bank and Export Import Bank have helped finance IMIP estate projects (IMIP, 2018). In mid-February 2014, Tsingshan Group secured a loan of USD 384 million from the China Development Bank for an NPI project in the IMIP estate (SMM News, 2014).

Table 1: Shareholders in IMIP and nickel, stainless steel and battery raw material processing companies in the IMIP estate

Company	Shareholdings (percentages)
Indonesia Morowali Industrial Park (IMIP)	Shanghai Decent Investment (Tsingshan) (49.69); Bintang Delapan Investama (25.31); and SMI (25).
Sulawesi Mining Investment (SMI)	Shanghai Decent Investment (Group) Co. Ltd. (46.55); BDM (25.65); Reed International Limited (24); and Fujian Decent Industrial Co. Ltd (3.8)
Indonesia Guang Ching Nickel and Stainless Steel Industry (GCNS)	Guangdong J-Eray Technology Group Co. Ltd. (35); Guangdong Guangxin Holdings Group Ltd. (25); IMIP (25); Luck Scenery International Limited (5); and Kanwa Company Limited (5)
Indonesia Tsingshan Stainless Steel (ITSS)	Tsingshan Holding Group (51); Ruipu Technology Group Co. Ltd. (19); Tsing Billitons Industrial Group (10); IMIP (10); and Luck Scenery International Limited (10)
Tsingshan Steel Indonesia (TSI)	Shanghai Decent Investment (Group) Co. Ltd. (80); IMIP (20).
Indonesia Ruipu Nickel and Chrome Alloy (IRNC)	Tsingshan Holding Group (70) Ruipu Technology Group Co. Ltd. (20), and IMIP (10)
Dexin Steel Indonesia (DSI)+	Delong Steel Singapore Projects Pte Ltd. (45); Shanghai Decent (43); and IMIP (12)
Hengjaya Nickel Industry (HNI)	Nickel Mines (80); and Shanghai Decent (20)
Ranger Nickel Industry (RNI)	Nickel Mines (80); and Shanghai Decent (20)
Huayue Nickel & Cobalt (HYNC)	Huaqing Nickel & Cobalt (57); China Molybdenum Co. (30), Tsingshan Group (10); and Hualong and Long Sincere (3)
Qing Mei Bang New Energy Materials Indonesia (QMB)++	GEM Co. Ltd. (36); Brunp Recycling Technology Co. Ltd. (CATL) (25); Tsingshan Group (21); IMIP (10); and Hanwa Co. Ltd. (8)++

+ Hanwa Co. Ltd., a Japanese steel trading company, bought a 10 percent stake in PT DSI in March 2020. However, shares in which companies were bought from the three initial shareholders were not disclosed (Hanwa, 2020).

++ In early January 2021, GEM Co. Ltd. Stated openly that it had made an agreement with a partner in the IMIP estate to increase its shareholding to 72 percent. Gem would buy a 21 percent stake belonging to Tsingshan and a 15 percent stake belonging to CATL (Reuters, 2021).

Sources: IMIP (2018:17, 93). Dexin Steel Indonesia (2017); Nickel Mines Limited (2020).

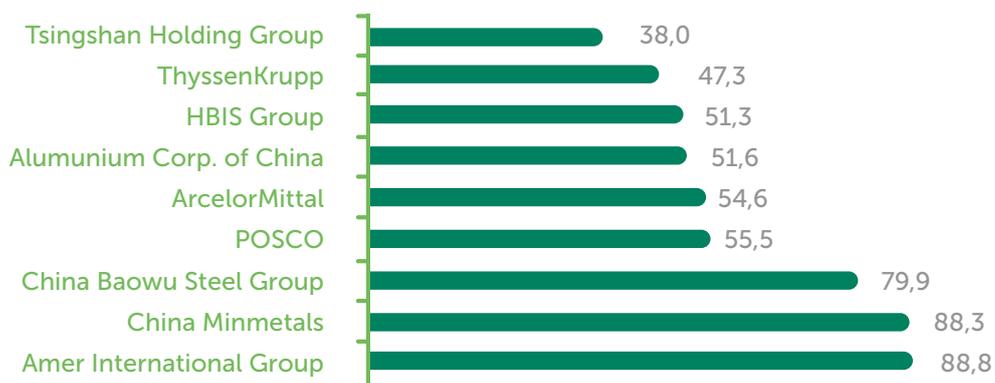
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The IMIP estate is an example of the power of transnational capital in controlling vertically integrated natural resource-based industries. At the center of this power is the Tsingshan Group, which controls the management of the industrial estate, access to nickel ore deposits, nickel smelting industries, stainless steel industries and raw material industries for electric vehicle batteries through its shareholdings and collaboration with various other international corporations. National companies like the Bintang Delapan Group control minority shareholdings in companies in the estate (see Table 1). Following the IMIP model, Tsingshan has built a second industrial estate, namely Indonesia Weda Bay Industrial Park (IWIP) in North Maluku. Last year, PT Weda Bay Nickel (an Eramet, Tsingshan and Antam joint venture),

PT Yashi Indonesia Investment (a Tsingshan and Zhenshi joint venture) and PT Youshan Nickel Indonesia (a Chengtun, Huayou and Tsingshan joint venture) launched several production facilities there (Nornickel, 2020b:12).

Tsingshan is a world metals industry giant. In 2018, Tsingshan Stainless Steel was the world's 46th largest steel producer with annual production of 9.29 million tons (World Steel Association, 2019:8). In 2020, prominent business media publication Fortune positioned Tsingshan Group, a company with its head office in Wenzhou, at number 10 in the world's largest metal producers (see Figure 1). The same publication's "Global 500" placed 329 Chinese companies in the top 500, with earnings of around USD 38.0 billion (Fortune, 2020).

Figure 1: World's top 10 companies in metal industries by earnings (USD x billion), 2020



Source: Processed from "Global 500" (Fortune, 2020)

The main player in the IMIP estate is Nickel Mines Limited. This Australia registered business entity is working with Shanghai Decent, the business investment wing of Tsingshan. The two companies control PT Hengjaya Nickel Industry (HNI) and PT Ranger Nickel Industry (RNI), which produce NPI in the IMIP estate. Nickel Mines and Shanghai Decent control 80 percent and 20 percent of Hengjaya Holdings Private Ltd respectively. Hengjaya Holdings Private controls a 99 percent stake in HNI. Meanwhile, the remaining one percent is controlled by Hengjaya Nickel Private, a subsidiary of Hengjaya Holdings Private. The same pattern applies to RNI, where Nickel Mines controls an 80 percent stake in Ranger Investment Private, and Shanghai Decent controls 20 percent. Ranger Investment Private owns 99 percent of shares in RNI, while Ranger Investment Private subsidiary, Ranger Nickel Private, controls one percent. Both Hengjaya Holdings Private and Ranger Investment Private are registered in Singapore. Nickel Mines Limited also controls an 80 percent shareholding in PT Hengjaya Mineralindo, holder of an IUP production concession covering 5,983 hectares in Bungku Pesisir subdistrict, approximately 12 kilometers from the IMIP estate (Nickel Mines Limited, n.d.). Nickel Mines, therefore, is the only company outside Tsingshan that has any vertical control over mining activities and nickel smelting in the IMIP estate.

Other giant investors in the IMIP estate are Huayou Cobalt Co. Ltd. (Huayou) and China Molybdenum. Huayou is the world's largest supplier of metals for electric vehicle batteries and is the largest producer of purified cobalt in China (Bloomberg News, 2019). China Molybdenum is a Chinese giant operating in mining, smelting, purification, trading and research in precious and base metals. Forbes

(2020) placed Molybdenum at number 1,463 in its "Global 2000" list of world giants. In the IMIP estate, Huayou, Molybdenum and Tsingshan are involved in a joint venture in a high-pressure acid leaching project through PT Huayue Nickel & Cobalt (HYNC).

Other world class Chinese investors in the IMIP estate are two battery companies, namely GEM Co. Ltd. and Brunp, a subsidiary of Contemporary Amperex Technology Ltd. (CATL). Both companies, together with Tsingshan Group, IMIP and Hanwa (Japan) established PT Qing Mei Bang New Energy Materials Indonesia (QMB) to build a plant for producing raw materials for electric vehicle batteries. GEM is the world's largest battery recycler and China's second largest purified cobalt producer (Bloomberg News, 2019). CATL is the world's largest supplier of electric vehicle batteries by sales, and supplies batteries to Volkswagen, BMW and Honda, as well as several large vehicle manufacturers in China. In 2018, CATL secured profits of USD 512 million (Fortune, 2019b). Forbes (2020) placed CATL at number 943 in its 'Global 2000'.

3.2.2 Production facilities

Various facilities and production infrastructure have been set up in stages in the IMIP estate since 2014. In addition to smelters and a variety of other plants, infrastructure available in the IMIP estate includes power plants, a seaport, an airport with a 1,800-meter runway, a telecommunications network, a luxury hotel, a polyclinic, polytechnic college, etc. (also see IMIP, 2015).

Numerous companies are now operating in the 2,000-hectare industrial estate. The first was Sulawesi Mining Investment (SMI), with a production installation officially opened by President Joko Widodo on 28 May 2015. SMI has smelters with NPI production capacity (10-11

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percent Ni) of 300,000 tons annually. Its nickel ore supplies come from affiliated companies. SMI uses four rotary kiln electric furnaces for processing nickel ore (1.8-2.0 percent Ni) and operates a stainless steel slab production plant with an annual production capacity of one million tons.

Second is PT Indonesia Guang Ching Nickel and Stainless Steel Industry (GCNS), which has smelters with NPI production capacity of 600,000 tons annually and two 150 MW power plants. Commencing production in April 2016, GCNS has 8 rotary kiln electric furnaces with nickel ore laterite (1.9 percent) as their raw material. The company consumes 6 million tons of nickel ore annually, which is supplied from the BDM mining area or bought from other nearby sources. The company also has a stainless steel slab facility with an annual production capacity of 1 million tons, and a hot rolled coil facility with production capacity of 2 million tons annually (IMIP, 2018:17,87,103).

Third is the installation belonging to PT Indonesia Tsingshan Stainless Steel (ITSS), which has built eight rotary kiln electric furnaces with NPI production capacity of 600,000 tons annually. ITSS has been operating two 350 MW power plants. The company has a stainless steel production line with production capacity of 1 million tons of stainless steel slabs annually and a hot rolled coil production line with an annual capacity of 2 million tons (IMIP, 2018:90). In early 2020, ITSS began building silicon manganese and oxygen plants, and a 350 MW power plant. These will be able to produce 500,000 tons of silicon manganese annually, and oxygen at a capacity of 120,000 nm³/hour with actual output of 87,400 nm³/hour. The project is expected to commence operations in the third quarter of 2021 (Indonesia Tsingshan Stainless Steel. 2019).

Fourth is PT Tsingshan Steel Indonesia (TSI), which also operates facilities in the IMIP estate. The company operates smelters with annual NPI production capacity of 500,000 tons. In addition to NPI, TSI also produces carbon steel after building a carbon steel plant with an annual production capacity of one million tons (Daly and Evans, 2019). To fulfill raw material requirements for the series 200 stainless steel smelting project in the IMIP estate, the company also plans to build an NPI/pig iron plant with production capacity of 507,000 tons of NPI and 700,000 tons of pig iron annually. This plant is expected to commence operations in the fourth quarter of 2021. To meet the needs of this project, TSI is building two 65 MW power plants (Tsingshan Steel Indonesia, 2018).

Fifth is PT Indonesia Ruipu Nickel and Chrome Alloy (IRNC), which operates a ferrochrome (FeCr) smelter with annual production capacity of 600,000 tons, and a stainless steel cold rolled coil plant with annual production capacity of 700,000 tons. IRNC's ferrochrome smelter produces ~55 percent FeCr from the 1-1.2 million tons of chromium ore IRNC ships in annually from South Africa. IRNC's ferrochrome product is delivered hot to other projects in the IMIP estate for stainless steel production (IMIP, 2018).

The sixth company operating a plant in the IMIP industrial estate is PT Dexin Steel Indonesia (DSI), whose steel facility commenced production in mid-2020. The plant produces 3.5 million tons of steel annually. Its steel products include steel slabs, billets, round bars and wire. Last October, the company announced its planned first-stage expansion for increasing production capacity to six 6 million tons annually by the end of 2021 (Zhang and Daly, 2020) Seventh is another smelter owned by HNI. With two furnaces, Hengjaya has been operating smelters since

early 2019. In 2020, the company produced 145,926 tons of NPI with an average content of 14.7 percent Ni (Nickel Mines Limited, 2020). HNI relies on nickel ore supplies from PT Hengjaya Mineralindo, an IUP license holding mining company, which is part of the Nickel Mines group. Since 2015, Hengjaya has supplied nickel ore to the IMIP estate based on purchase agreements with SMI and ITSS. Since then, it has supplied approximately 896,000 tons of nickel ore to IMIP with average content of 2.6% (Hengjaya Nickel Industry, 2018; Nickel Mines Limited, 2019:4-5, 38).

The eighth company operating a smelter in the IMIP estate is RNI, which commenced operations in 2018 thanks to a cooperation agreement between Shanghai Decent and Nickel Mines. Shanghai designed, built, and operates the smelter with a production capacity of no less than 14,000 tons of NPI annually. Shanghai also financed the project through a share loan to a Nickel Mines subsidiary. The project's rotary kiln electric furnace smelter, owned by RNI, has been operating since 2019. In 2020, RNI produced 149,969 tons of NPI with a nickel content of 14.7 percent (Nickel Mines Limited, 2020).

In addition to nickel smelting and stainless steel projects, the IMIP estate has attracted international attention because of investments to process nickel as a raw material for electric vehicle battery production. The estate already has two high-pressure acid leaching plants undergoing construction with total investments of USD 2.3 billion.

Firstly, HYNC – Huayou, China Molybdenum, Tsingshan – is in the process of building a high-pressure acid leaching plant to produce mixed nickel hydroxide cobalt with an annual production capacity of 60,000 tons (Reuters,

2019). Huayoe said the company is investing in smelting and further purification of nickel as a raw material for lithium-ion batteries (Li, 2018). The project is expected to commence operations in 2021.

Secondly, QMB – Tsingshan, GEM, Brunp/CATL, IMIP, Hanwa – positioned the first foundation stone for its development of a plant in the IMIP estate in January 2019. QMB has invested USD 1 billion to build a high-pressure acid leaching plant to produce semi-finished nickel and cobalt. The plant has been designed to produce 50,000 tons of nickel mixed hydroxide precipitate (MHP) annually, where 30,000 tons are processed into nickel sulfate (Fraser et al., 2021:130). The project, originally planned to commence operations at the end of 2020, has been delayed due to the global Coronavirus pandemic, with production now planned for 2022 (Reuters, 2021).

3.3 Nickel-based industry successes

The IMIP estate is an example of a successful nickel-based natural resources management industry in Indonesia. The industrial estate has proven capable of producing NPI and stainless steel with extremely low production costs. Several factors underlie these successes. Firstly, the IMIP estate combines upstream nickel mining with downstream nickel processing in a production value chain. The industrial estate unites a "nickel laterite-NPI-stainless steel" value chain with small spatial distances, thus saving raw material costs.

The IMIP estate is located in a region proven to be rich in high content laterite nickel ore deposits. Nickel ore is cheap due to low mining costs and can be supplied cheaply and easily to the estate's furnaces. In 2019, with total nickel mining costs, including royalties and barge transportation, averaging USD 21.50 per

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ton, and selling prices of USD 28.50 per ton, Hengjaya Mineralindo still enjoyed decent profits (Paterson Securitas Limited, 2019:7). Moreover, Hengjaya Mineralindo is also affiliated with two smelting companies in the estate under the control of Nickel Mines Limited. BDM, the main mining company in Morowali, is also affiliated with nickel processing companies in the IMIP estate. Currently, thirty-seven IUP production license holding nickel mining companies in Morowali control almost 92,000 hectares of concessions (Seputar Rakyat, 2020). Generally, mining companies do not have smelters, so they cannot export and can only sell nickel ore to in-country smelting industries.

The nickel ore export ban benefits transnational capital fractions in the IMIP estate. With IMIP setting nickel ore prices, companies in the estate control nickel supplies absolutely and cheaply. Domestic nickel ore prices are indeed lower than international market prices. In 2018, 1.7 percent content nickel ore was selling in Indonesia for USD 17 per metric ton. Meanwhile, in China 1.65 percent content nickel ore was selling for USD 30 per metric ton (AISI, 2020). With cheaper nickel ore prices, companies in the IMIP estate can keep down NPI production costs.

Production costs are also cheaper because of the variety of processing plants all being integrated in one estate. The IMIP estate mixes NPI, ferrochrome and ferrosilicon smelters as well as electrolytic manganese, stainless steel, carbon steel, semi-coke, coke and sulfuric acid plants. NPI and ferrochrome – the main raw materials for stainless steel – produced in the IMIP estate are consumed directly by stainless steel manufacturing plants in the same location. With its integrated complex, the IMIP estate becomes the center for stainless steel processing industries with lower production

costs. Consequently, its stainless steel products are sold with lower prices in global markets.

IMIP's low stainless steel prices have triggered protests from world metal industry players. The American Iron and Steel Institute (AISI) considers Indonesia's nickel ore export ban to be the root of problems. The institute says the ban has subsidized a massive growth in Indonesia's stainless steel production, as producers have access to the excess supply of domestic nickel ore. The export ban benefits metal companies in the IMIP estate and hits American stainless steel producers hard. The association of iron and steel producers has asked the American government through the United States Trade Representative (USTR) to reevaluate Indonesia's eligibility to secure generalized system of preference (GSP) facilities (AISI, 2020).

Protests have also come from the European Commission, which claimed the export ban meant companies in the IMIP estate were buying nickel ore at prices of more than 30 percent below the international market price. This allowed steel companies in the IMIP estate to sell stainless steel in European markets at lower prices, thus harming steel producers in Europe (Daly, 2020). For the sake of its domestic producers, in April 2020, the European Union applied import duties of 17 percent to imports of hot rolled coil from the IMIP estate. In 2019, exports of stainless steel from the IMIP estate to the European Union reached 208,000 tons or almost 10 percent of those countries' total stainless steel imports (Nornickel, 2020a:3-4). In January 2021, the European Union asked the World Trade Organization to set up a panel to resolve the problem of the nickel ore export ban in Indonesia (Blenkinsop, 2021)

Second, the IMIP estate and industries operating in the estate receive special treatment through

pro investment policies. The government provides a variety of facilities and fiscal incentives to industrial estates, as provided under Government Regulation No. 142/2015 on Industrial Estates (State Gazette No. 365, 2015). Minister of Finance Regulation No. 105/PMK.010/2016 on Provision of Tax and Customs Facilities for Companies in Industrial Estates and Industrial Estate Companies provides stimulus in the form of tax allowances and exemptions from customs duties and value added tax on imports (Official Gazette No. 998, 2016). Incentives also include tax holidays, as industries in the IMIP estate are classified as “upstream base metal industries.” Minister of Finance Regulation No. 150/PMK.010/2018 on Provision of Corporate Earnings Tax Breaks provides tax holiday incentives to “Pioneer Industries” like upstream base metal industries (Official Gazette No.

1553, 2018). Such incentives are nothing more than an effort to attract foreign investment in capital-intensive industries, including base metal processing.

Two companies in the IMIP estate controlled by Nickel Mines Limited enjoy such tax breaks. Both companies – HNI and RNI – are deemed to meet criteria stipulated in Article 3 of Minister of Finance Regulation No. 150/PMK.010/2018 on Corporate Income Tax Reduction for Pioneer Industries (Official Gazette No. 1553, 2018). HNI secured this concession for 9 years in November 2018, and RNI for 9 years in March 2019. From the time they commence production, the companies enjoy corporate income tax reductions of 100 percent for the first 7 years, then 50 percent reductions for a further 2 years (Nickel Mines Limited, 2019:1,4).

Table 2: Royalties for nickel ore and processed nickel

	Royalty (% of selling price per ton)	
	Government Regulation No. 9/2012	Government Regulation No. 81/2019
1 Nickel ore	5	10
2 Purified products:		
2.1 NPI	-	5
2.2 Nickel matte	4	2
2.3 FeNi	4	2
2.4 Nickel oxide	-	2
2.5 Nickel hydroxide	-	2
2.6 Nickel MHP	-	2
2.7 Nickel HNC	-	2
2.8 Nickel sulfide	-	2
2.9. Nickel metal	-	1.5

Source: Processed from State Gazette No. 16, 2012 and State Gazette No. 223, 2019.

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Companies in the IMIP estate also secure special treatment because of unclear licensing provisions. Smelter companies do not need to pay production fees or royalties as they can exploit loopholes in overlapping licensing. If they are operating based on a Special Production Operation Mining Business License (IUP-OPK) – as separate or integrated mining, smelting and purification operations under the Mining Law – then smelter companies should pay royalties at the rates listed in Table 2, as provided under Government Regulation No. 9/2012 on Types and Tariffs for Non-Tax State Revenues Applicable to the Ministry of Energy and Mineral Resources (State Gazette No. 16, 2012), and Government Regulation No. 81/2019 on Types and Tariffs for Non-Tax State Revenues Applicable to the Ministry of Energy and Mineral Resources (State Gazette No. 223, 2019). The Ministry of Energy and Mineral Resources (2017) named SMI in the IMIP estate as being one of five companies with IUP-OPK licenses operating in Indonesia in 2017. In Central Sulawesi, in addition to SMI, there is PT COR Industri Indonesia in North Morowali. These companies generally produce NPI, and therefore pay royalties.

Conversely, when using industry business licenses (IUIs), there is no obligation for smelter companies to pay royalties. IUIs are regulated under Law No. 3/2014 on Industries (State Gazette No. 4, 2014) and Government Regulation No. 105/2015 on Industrial Business Licenses (State Gazette No. 329, 2015). GCNS – an NPI producer in the IMIP estate – has an IUI (Ministry of Energy and Mineral Resources, 2017). Consequently, the company does not pay royalties. This invited a complaint from Central Sulawesi Governor, Longky Djanggola, who felt this policy dualism was the reason for smelters in the IMIP estate not contributing to regional revenues (Mulyana, 2020). This has been an issue

since at least 4 years ago, when the Indonesia Smelter Enterprises Association (AP3I) strongly rejected its members having to pay production fees, reasoning that mining companies pay royalties, not processing companies (Hendra TM, 2016).

Third, the IMIP estate and industries in the estate operate their own steam powered, large capacity captive power plants. Installed capacity in the IMIP estate is currently at 2,000 MW and will increase with the growth of industries inside the estate. This is probably because through Government Regulation No. 142/2015, the government grants amenities to industrial estate managers and companies operating in industrial estates to build and operate their own power plants (State Gazette No. 365, 2015). By investing in power plants that use coal, which is cheaper than other energy sources, companies in the IMIP estate can keep down production costs.

The downside is the serious environmental problems inherent to fossil fuel-based energy generation, which produces high levels of carbon emissions. Power plants in the IMIP estate also cause air pollution, increasing the risk of respiratory tract and lung diseases, both for workers and communities in nearby settlements (Sangadji et al., 2019:22-3; Seputar Rakyat, 2020).

Fourth, the IMIP estate relies on cheap labor with low levels of work security and work safety. The IMIP estate has created a large working class. Thousands of people from Morowali and other regions in Central Sulawesi, and even from outside the province, work in the estate. In 2019, official government data put the number of workers at more than 38,000 (Sangadji et al., 2019:17; Seputar Rakyat, 2020). But workers are exploited in poor working conditions, including

an absence of work contracts or perjanjian kerja bersama (PKB), unilateral layoffs, wages being too low to meet basic needs, and vulnerability to work accidents due to poor work safety. Repeated protest action and worker strikes in the IMIP estate over the past five years show laborers are fighting for better work conditions (Sangadji et al., 2019:23-6; Seputar Rakyat, 2020).

3.4 Impacts on the regional economy

The presence of the IMIP estate has changed the economic profile of Morowali. Manufacturing industry contributions to Morowali's gross regional domestic product (GRDP) rose sharply from 3.40 percent in 2009 to 37.07 percent in

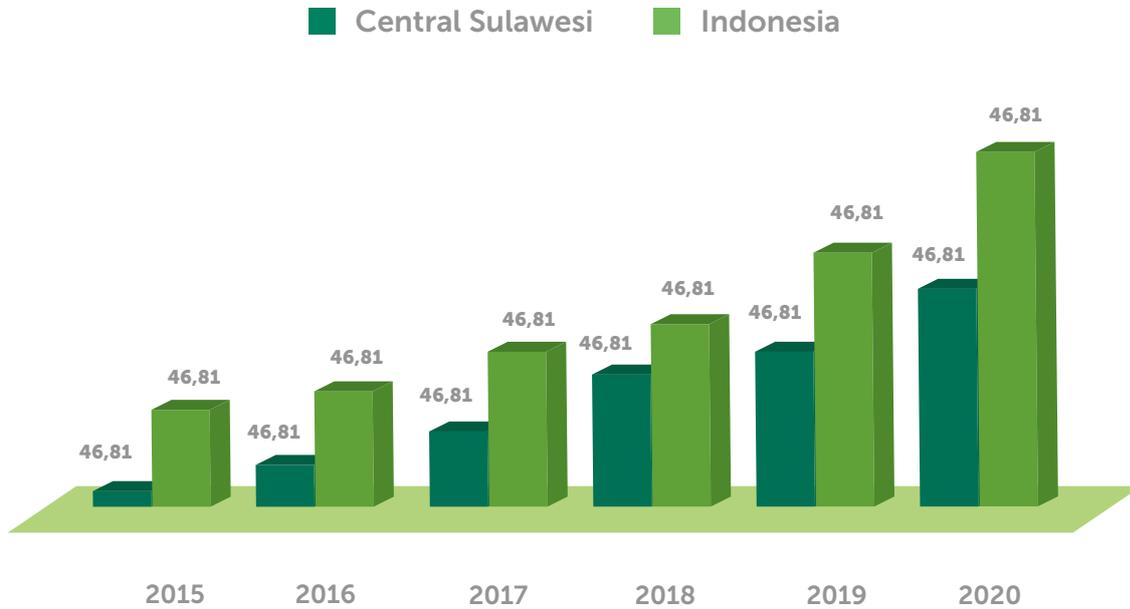
2019. The sources of this sharp increase were none other than the nickel smelting industries and stainless steel manufacturing in the IMIP estate. Another contributor, closely linked to the growing manufacturing industries, is mining. Official statistics do separate mining from industry, with mineral smelting and purification being categorized as manufacturing businesses, despite being closely linked to mineral extraction (Fine and Rustomjee, 1996). Together, mineral mining and processing contributed almost 70 percent of Morowali's GRDP in 2019. In direct contrast, agriculture sector contributions have plummeted over the last ten years (see Figure 2).

Figure 2: Percentages of GRDP by Sector in Morowali District 2009 and 2019



Source: Processed from Morowali District Central Statistics Agency (2013, 2020).

Figure 3: Iron and Steel Exports, Central Sulawesi and Indonesia (USD x million) 2015-2020



Sources: Central Statistics Agency (2019, 2020); Central Sulawesi Statistics Agency (2015-2020)

Industrial areas in Morowali have become vital for Central Sulawesi's exports, with contributions being extremely dominant over the last five years since SMI began operating the first NPI smelter in 2015. The contribution of iron and steel exports as a percentage of Central Sulawesi's total export value has increased steadily at 36.92 percent in 2015, 49.15 percent in 2016, 61.73 percent in 2017, 66.77 percent in 2018, 74.07 percent in 2019 and 85.66 percent in 2020 (BPS Central Sulawesi, 2015-2020).

Central Sulawesi, and particularly Morowali, has been the main source of Indonesia's iron and steel exports, as shown in Figure 3. Export destinations for Central Sulawesi iron and steel cover a wide geographic area from Asia to Europe and Latin America. China is the main destination accounting for 36.23 percent of total export value for Central Sulawesi iron and steel, followed by Taiwan at 20.62 percent (BPS Central Sulawesi, 2020:51-52).

IV. In Closing

The IMIP estate is a genuine example of governance success in the field of mineral processing. Nickel processing in the IMIP estate is an example of a capital-intensive industry being controlled by a highly powerful foreign capital fraction. The IMIP estate has grown as a vertically integrated upstream to downstream industrial estate under the control of a small number of international capital investors. The Chinese metal industry giant, Tsingshan Group has, in a relatively short time, made use of the Mining Law's downstreaming policy by successfully building its metal industry capacity

in the IMIP estate. By using cheap and easy access to high content nickel deposits, relatively cheap labor, low environmental management standards, and preferential treatment from the government for foreign capital investments in mineral processing industry sectors, the IMIP estate has grown to become one of the world's largest integrated NPI-stainless steel industrial estates. This allows the IMIP estate to produce NPI and stainless steel with low production costs, making these commodities extremely competitive in international markets.

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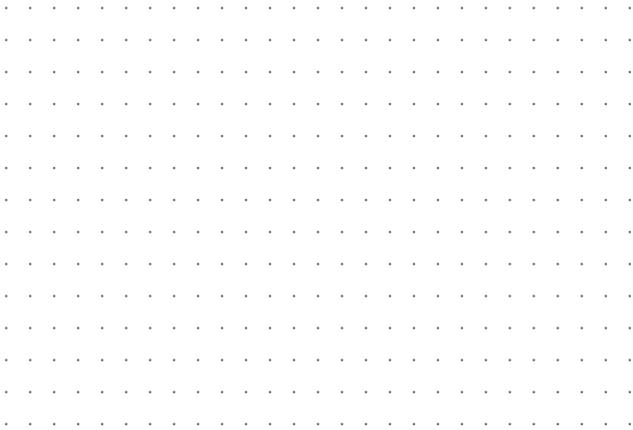
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